

ABSTRACT

A method and apparatus for continuous drawing of fibers in a form of coiled fiber loops. The fiber is loops are continuously ~~wound about~~ laid on receiving ends of a plurality of conveyer-drawing members (CDM) [e.g., rotating threaded spindles (54) or circulating endless chains (80)] disposed about a central axis and ~~diverging~~ diverged from this axis. Coiled fiber loops are conveyed along the central axis and simultaneously drawn by enlarging a circumference of the fiber loops by the CDM. The leading fiber loops are continuously ~~unwound~~ taken off at delivery ends of the CDM and conveyed from the drawing apparatus at an outlet speed. A heat chamber (11) envelopes the conveyer-drawing members. Thus, a fiber speed in the drawing process comprises a fraction of the outlet speed. The process can operate at lower drawing speed, longer drawing time, and the same or higher ~~the~~ outlet speed and throughput than in commercial drawing processes. The method will produce high-strength/high-modulus/low-shrinkage polymer fibers.

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